

Whereby said thermal electrical coolers separate said platform from said package box thermally and duct extracted heat from said platform to said package box for transfer out of said package box.

[c3]

The package of claim 1 further comprising a lid sealed to the top of said package box, the lid being free of connectors, leads, and mounting tabs.

[c4]

The package of claim 1 further comprising a base, which having means for being secured to the bottom of said package box.

REMARKS-General

By above amendment, the applicant has rewritten all claims to define the invention distinctly so as to overcome the technical rejections and define the invention patentably over the prior art.

I read the patents US 5,195,155, US 5,065,226, US 2003/0174976, and US 4,615,031 carefully a few times. I do believe what are disclosed in my invention cannot be taught in the cited patents.

The essence of opto-electronic packaging is to optically align opto-electronic devices to an optical connector (including an optical fiber with/without a lens), which is attached on the package box. There are different ways to align the opto-electronic devices to the optical connector optically, as disclosed in the prior patents. The opto-electronic device sits on a thermally conductive platform and a lens extracts the light emission from the opto-electronic device. The extracted light emission is collimated or converged on the optical connector.

In the previous art, as disclosed in the Fig. 1 of my patent application, the opto-electronic devices and multi-optical components sit on a platform and the platform sits on the base or TEC then on the base of the package box. The height of every device is precisely calculated and machined to allow the height of the opto-electronic device to match the height of the optical connector to achieve a good optical coupling. It is very expensive and difficult to machine every part to such high precision (better than sub micron). As disclosed in Shimaoka's patent, the opto-electronic device also sits on the platform, said platform sits on a TEC, said TEC sits on the base (or a sidewall) of the package and the optical coupling was achieved by adjusting a lens holder (a pipe in the patent) or deforming plastically an optical element holder. If the TEC mounted on the base or a sidewall, the opto-electronic device, the platform, and TEC are vertically integrated. The height of the opto-electronic device (from the opto-electronic device to the base or